Claytor Lake
Fisheries Management Report
2004

Imagine yourself on a waterbody that is more like a wide river than a lake. When you do, you will have a picture of the majority of Claytor Lake. Claytor Lake, a 4,475-acre reservoir, stretches northeastward across the Pulaski County countryside near Radford for about 21 miles. American Electric Power Company (AEP) impounded Claytor Lake in 1939 to produce hydroelectric power from the incessant flow of the New River. Claytor Lake dam features 4 hydroelectric turbines used by AEP to produce electricity. Power is produced according to guidelines set forth in AEP's operating license by the Federal Energy Regulatory Commission.

Most people who visit Claytor Lake State Park have a limited view of this river-like reservoir. From this popular state park on the lower third of the lake, the visitor has a view of a sparkling lake, bustling with boating activity, with the top of Claytor Lake dam in the distance. The visitor who launches a boat from the state park launch ramp can easily reach the dam and some major coves (like Dublin Hollow, Texas Hollow, and Spooky Hollow) in 10 minutes. However, the visitor who wants to explore can ride about 15 miles upstream on the lake to the Allisonia boat ramp, where the New River enters the lake. This ride can take up to an hour at normal speeds. Boaters who visit the upper lake area should be aware that the lake becomes very shallow in areas upstream from Lighthouse Bridge, the only bridge that crosses the main lake (Pulaski County Route 672). Near the midpoint of Claytor Lake, the only major tributary of the lake, Peak Creek, enters the lake. Peak Creek is a major feature of the lake for anglers, since striped bass and hybrid striped bass move in and out of this tributary each year, and the coves off of this creek are good places to find largemouth and spotted bass.

When Claytor Lake was first impounded, fish found in the New River were trapped within the reservoir. Species of fish that found Claytor Lake's waters a suitable place to live expanded their populations to take advantage of the reservoir habitat created after the dam was closed. Species like smallmouth, largemouth, and spotted bass, bluegill, black crappie, channel and flathead catfish, yellow perch, and carp flourished in this new environment called Claytor Lake. Most of these fish prefer shoreline areas of the lake. During the early years of Virginia Department of Game and Inland Fisheries (VDGIF) management efforts on the lake, fish were introduced to the lake to take advantage of the abundant open water area of the lake. Species like trout did not take well to the lake, since the coldwater habitat they needed was not available. VDGIF fisheries biologists studying the lake were able to successfully introduce alewife as a prey fish in the open waters. Then, they began stocking walleye to prey on the abundant alewife. Starting in the late 1960's, striped bass were stocked as an additional predatory fish in the open waters of Claytor Lake. Annual stocking of stripers continues today. In 1993, fisheries biologists decided to add striped bass hybrids (a cross between striped bass and white bass) to diversify the open water fishery more. In 1996, walleye stockings were discontinued after a genetic study of walleye in the lake and the upstream New River found that a unique strain of walleye exists in the New River. Prior to this study, walleye stocked in

Claytor Lake were brought in from other areas of North America. Biologists managing the fishery feared that these other genetic strains of walleye would contaminate the unique New River walleye strain that was producing a number of state record size walleye through the early 1990's.

Because Claytor Lake is a main stem impoundment of the New River with a large watershed sending it river flow, water passes through Claytor Lake more quickly than it does in most large Virginia reservoirs. This feature of Claytor Lake yields a lake that has different temperature and oxygen levels from other nearby reservoirs like Smith Mountain Lake. Claytor Lake's temperature and oxygen levels are a big factor for fishes like striped bass and striped bass hybrids that are annually stocked for anglers to catch. Under a cooperative management agreement with the Virginia Department of Game and Inland Fisheries, AEP maintains stable water levels in Claytor Lake between April 15 and June 15 to protect spawning habitat for shallow water spawning fishes like sunfish, crappie, and bass.

Claytor Lake offers a little something for every type of angler. Whether you enjoy working shoreline trees for bass and bluegill or trolling deepwater areas for stripers and hybrids, Claytor Lake has fishing for you. Read on to learn more about the mysterious waters of Claytor Lake and how to catch the fish that swim in them.

Black Bass

Smallmouth, largemouth, and spotted bass (collectively called "black bass") are the "bread and butter" fishes of this lake. About 58 percent of the anglers at Claytor Lake fish for "black bass." The three black bass species in Claytor Lake are regulated by a 12-inch minimum size limit and anglers may harvest 5 per day (all three species combined). Anglers are encouraged to practice catch-and-release of trophy-size bass from the lake.

Claytor's steep and rocky shorelines make it a good place for smallmouth bass to prosper. In 2003, Claytor Lake produced 25 smallmouth bass certificates (more than 5 pounds or over 20 inches). This production of trophy smallmouth bass ranked Claytor Lake as the top reservoir in the state for trophy smallmouth bass. Smallmouth bass are more numerous in the middle and lower lake areas (from the mouth of Peak Creek downstream). Good coves for smallmouth bass in the lower lake are Roseberry Hollow and Dublin Hollow. Both coves are located in the downstream most portion of the lake (between Claytor Lake State Park and the dam).

Claytor Lake holds fewer largemouth bass than other Virginia lakes, and they grow slowly in this mountain reservoir. Claytor Lake's largemouth bass populations appear to be increasing. In 1992, largemouth bass made up about 10 percent of the black bass according to electrofishing catch results by fisheries biologists studying the lake. Largemouth bass increased to about 30 percent of the black bass electrofishing catch by 2003. Anglers can find this species in coves throughout the lake, but they are most abundant in Peak Creek. Other good locations for largemouth bass fishing in the lake are Clapboard Hollow, a major cove in the lake a couple of miles upstream from the mouth of Peak Creek, and Spooky and Texas Hollows, major coves across the lake from Claytor Lake State Park. The Claytor Lake record for largemouth bass was a 14- pound, 6-ounce giant caught in June 1991.

Spotted bass in Claytor are generally smaller than the other black basses. They rarely reach 2 pounds in size. In fact, most anglers that think they are catching small largemouth bass are probably catching small spotted bass, particularly in the upper lake area (upstream from Peak Creek) where spotted bass are more numerous.

Anglers fishing for black bass in Claytor Lake can use information collected on bass food habits during a recent study at Claytor Lake to select lures and techniques for these species. Smallmouth bass and spotted bass have very similar diets, with both relying mostly on crayfish. Techniques and lures that mimic crayfish are most likely to be successful in producing catches of these fish. Both of these bass species eat a lot of bluegill as well as some alewife and gizzard shad, so they may also hit lures that imitate fish. Largemouth bass diets are quite different than smallmouth and spotted bass diets, which may be one reason they are doing so well in the lake. Largemouth bass eat bluegill, alewife, gizzard shad, and crayfish, depending on the season of the year and whether these prey are abundant in a given year. Lures that imitate fish are the best choice for largemouth bass, but they may also hit crayfish imitations.

Striped Bass

VDGIF fisheries biologists maintain the striped bass population in Claytor Lake through annual stocking. Biologist John Copeland, in cooperation with researchers from Virginia Tech's Department of Fisheries and Wildlife Sciences, experimented with increased stocking rates for striped bass in the lake in 1998, 2001, and 2002. Doubling the stocking rate in 1998 and 2001, combined with good spawns of alewife and gizzard shad, resulted in 2 prominent year classes of stripers in the lake. The 1998 stripers are now running upwards of 30 inches in length and they weigh over 15 pounds. The 2001 stripers are in the 19 to 24 inch range and are numerous in size. Recent sampling indicates that the some of the 2000 stripers will be represented in future catches at the lake. The 2002 striper year class also looks strong in recent sampling, so it will produce similar numbers of adult fish to those from the 1998 and 2001 stockings.

Claytor Lake produced 15 certificate (more than 20 pounds or over 37 inches) stripers in 2003. At least one striper over thirty pounds in size is caught each year in this lake. Stripers can be caught year-round, although most anglers have their greatest success from late September through May. Water temperatures at or below 70 degrees seem to produce the best fishing.

Recent striper diet studies at Claytor Lake showed that stripers rely mostly on alewife and gizzard shad. Therefore, it is no surprise that Claytor Lake anglers experience the best success using these species as bait. Gizzard shad and alewives are most easily caught using a cast net near the back ends of coves. Peak Creek is a great place for finding bait, but don't overlook smaller coves in the lake. Many stripers are taken with topwater baits (Redfins, Rapalas, etc.) and bucktails in the spring and fall. Fish points and flats adjacent to deep water for best topwater action. Trolling bucktails in 20-60 feet of water can produce good catches.

During the summer and early fall months of normal and wet years stripers primarily

"hole up" in the middle and lower lake areas close to the lake's thermocline (50-70 feet deep), where they find suitable temperature and oxygen levels. In drought years, stripers are unable to find suitable habitat anywhere in the lake during the summer months, so they are likely to roam the lake in search of suitable habitat. When the lake begins to cool in October, stripers begin chasing shad and alewife schools around the lake and are more difficult to locate. If you are lucky enough to see them chasing shad at the surface, you can catch them on top water lures. In winter months, look for stripers in the middle and upper lake areas, from the mouth of Peak Creek up to the Lighthouse Bridge. Find the bait schools and you are likely to find the stripers nearby.

Striped Bass Hybrids

Striped bass hybrids were introduced to Claytor in 1993 and are stocked each year. Many of the fish from the earliest stockings are 8-12 pounds today! These striped bass hybrids are a hard fighting fish that are good to eat! Since they can tolerate higher water temperatures, hybrids often chase schools of shad at the lake's surface at night in the summer months. Most of the time, hybrids live at similar depths and locations as the stripers in the lake. Their diet is very similar to stripers, so they can be caught using the same techniques.

White bass are found in Claytor Lake, but their numbers are down from historic levels. The best opportunity to catch white bass from the lake is during April and May when they run upstream to Allisonia, where the New River flows into Claytor Lake.

Anglers should keep in mind that the harvest of stripers and hybrids is limited to 4 fish per day (the two species combined), all of which must be longer than 20 inches. White bass are regulated by a creel limit of five per day, with no size limit. Anglers should study the differences between these fish carefully. Helpful identification information is available in the Department's recent publication, "The Angler's Guide to Virginia Freshwater Sportfish," which is available from Department offices statewide. There is also a comparative picture of the three species on this website.

Striped Bass and Striped Bass Hybrids: Friends or Foes in Claytor Lake?

Claytor Lake has a rare combination of fishing opportunity, with striped bass and its look-alike hybrid cousin (a cross between female white bass and male striped bass) stocked into the same lake. Striped bass have been stocked in Claytor Lake since 1969, but the species has not flourished to the extent witnessed at Smith Mountain Lake. While growth is good and a few trophy stripers are caught every year, catch rates for them have been modest. Department fisheries biologists theorize that stocked stripers either leave Claytor Lake through the hydroelectric dam, or that limited summer habitat (cool, well-oxygenated water) prevents many stripers from reaching trophy sizes. In 1993, hybrid striped bass were added to the lake, since it was believed that they tolerate higher water temperatures and may be less likely to leave through the dam.

Since stripers and hybrids are rarely stocked in the same lake, Department fisheries biologists initiated a study to document the performance of stripers and hybrids in Claytor Lake. Between 2001 and 2003, Virginia Tech graduate students John Kilpatrick and Jacob Rash and their professor John Ney, evaluated striper and hybrid growth, survival, habitat

use, and movements. The study, funded by American Electric Power and the Virginia Department of Game and Inland Fisheries, provided critical information for the future management (stocking, fishing regulations) for this duo of linesides in Claytor Lake.

John Kilpatrick's research found out where stripers live, particularly in the summer when their preferred habitat shrinks to a narrow band near the thermocline, 50-70 feet below the lake's surface. This phenomenon of striped bass life in southern reservoirs, called the summer temperature-oxygen "squeeze" has been shown to limit striper growth and survival in some southern reservoirs. Kilpatrick found that stripers have less than desirable habitat available to them in Claytor Lake, particularly in a drought year like 2002. In summer 2001, stripers holed up at 60-70 feet depth in cooler water in the lower third of the lake (between Claytor Lake State Park and the dam), while the striped bass hybrids were able to use warmer water closer to the surface (typically from 15 to 45 feet). During the summer of 2002, Kilpatrick's radio tagged stripers and hybrids were forced to roam much of the summer in the less than desirable habitat in the lake. The poor habitat conditions in the lake were a direct result of the drought. Body condition for both stripers and hybrids declined in fall 2002 compared to what was observed in fall 2001. Kilpatrick also observed a number of striped bass that appeared to have died from the poor habitat available to them in both years of his study.

Kilpatrick tagged both stripers and hybrids with reward tags to assess how many of each fish were typically taken out of the lake by anglers each year and how many migrate downstream from the lake. While the reward system is no longer in place, anglers should look for small yellow tags inserted into the underside of the fish that can be easily removed and returned to VDGIF or Virginia Tech. Biologists managing the lake's fishery can still gain valuable information from the tagged stripers and hybrids. If you catch one, record the tag number, location caught, and fish length and weight and alert either John Ney with Virginia Tech at (540) 231-7292 or John Copeland with VDGIF at (540) 961-8304. Some stripers and hybrids were implanted with radio tags, so anglers should be on the lookout for those as well. These radio tagged fish can be identified by a piece of wire (the antenna), sticking out of the fish's underside. If you keep a striper or hybrid that has a transmitter, follow the instructions on the tag for returning it, so VDGIF and Virginia Tech researchers can use it again. Kilpatrick documented little movement of stripers and hybrids through the dam downstream into the New River. He also received too few returns of striper and hybrid belly tags to assess angler harvest. Future studies may focus on more in-depth tagging of these species.

A few patterns emerged from Kilpatrick's research. First, only one fish left the lake through the hydroelectric dam during the course of the study. Second, most of the year, stripers and hybrids used the same areas and depths of water in the lake, but they were usually found in separate schools. In the summer months of 2001 (June to September), stripers and hybrids separated from each other due to differences in their preferred temperature and oxygen levels. Stripers were typically found in 50 to 70 feet of water, while hybrids spent their time at shallower depths of 15 to 50 feet. In summer 2002, both species used the same habitats. In fact, they spent most of the summer roaming the surface waters of the lake, trying to survive the poor habitat conditions caused by Virginia's

drought. Both species were found roaming in 10 to 30 foot water. Throughout the study, stripers used a more limited area of the lake than hybrids, especially in the summer. During summer, stripers were mostly located from the mouth of Clapboard Hollow downstream to the dam and hybrids were most likely located between Lighthouse Bridge and Peak Creek (in the upper end of the lake) and in the section of lake between Felt's Hollow and Hidden Hollow (in the midlake area). During fall, winter, and spring months, both species could be found throughout the lake. In fact, both fish ran to the headwaters of the lake at Allisonia each March. They also exhibited this behavior during times of high lake inflows, which rarely occurred during the 2 years of the study.

Jake Rash's research concentrated on the early life of Claytor Lake stripers and hybrids. Stripers are stocked in June at 1 to 2 inches, and hybrids in the 3-inch range are added in late summer or early fall. Before this research was done, nothing was known about striper or hybrid striper growth, movements, or survival in their first 11/2 years of life. First-year survival rates as low as 20% have been frequently reported for other lakes. Research at Smith Mountain Lake showed that death of young stripers was due chiefly to overwinter starvation. Fingerlings that failed to grow to at least 6 inches by fall simply lack the energy reserves to get through the winter. Based on Jake Rash's research, the same pattern has not emerged at Claytor Lake. Rash's research found no evidence for competition for food between young stripers and hybrids until they were almost one year old. Rash's research did not suggest that this competition was limiting survival of either species.

After evaluating the results of Kilpatrick and Rash's research, we do not plan any changes in our striper or hybrid striper stocking program. Although striper habitat is limited in Claytor Lake in poor water years, there is a significant amount of habitat for them in good water years. As a result, striper fishing can be maintained in this reservoir, yielding the opportunity for anglers to catch occasional trophy size stripers. The fact that hybrid striped bass can tolerate warmer temperatures allows them to achieve good population sizes in Claytor Lake. These hybrids tend to be easier to catch than stripers, so they provide nice fishing opportunity. Therefore, VDGIF fisheries biologists plan to continue stocking both species in the same way they have been stocked in recent years.

Other Popular Species

Walleye are still occasionally caught from the lake, but their numbers have dropped off since stocking was discontinued in 1996. Anglers have recently been catching yellow perch in the one-pound range. Black crappie caught from the lake typically average a little less than a pound. According to the Department's creel survey in 1998, many anglers take home a limit of 25 bluegill that average 0.5-pound each. Flathead and channel catfish (up to 20 pounds) can also be caught from the lake. With catches of 20 to 30 pound carp possible, anglers from as far away as England come to fish for them at Claytor.

Lake Access

Claytor Lake State Park, located on the north side of the lake within a few miles of the dam, provides 497 acres of park with camping, cabins, picnic areas, and a swimming beach, as well as a marina. For more information on the park, call 540-643-2500. To reach Claytor Lake

State Park, take the Claytor Lake State Park exit off Interstate 81 and follow the signs to the park.

Boat access to the lake is available for a small fee at private ramps at Claytor Lake State Park, Lighthouse Bridge, and at Conrad Brothers and Rockhouse Marinas on the Peak Creek arm of the lake. The Department maintains no-fee ramps at Allisonia (in the upper lake area) and near the entrance to the state park (Dublin Ramp).

Harry's Point boat ramp, a no-fee ramp located in the mid-lake area within Pulaski County's Harry S. DeHaven Park, has a double ramp and courtesy piers. Harry's Point, as this facility is often called, also has a handicapped-accessible fishing pier, where many of the lake's species can be caught throughout the year. During the fall and winter months, anglers are likely to catch striped bass and hybrid striped bass swimming near the pier. The easiest way to get to Harry's Point from Interstate 81 is to take the Route 605 exit (near the south end of Radford), and then follow the brown trailblazer signs to Harry DeHaven Park. From the Interstate 81 exit ramp, take Route 605 (Little River Dam Road). Follow Route 605 until you reach Route 663 (Owens Road), go right on 663, then look for signs marking the park when you get near the lake.

Maps and Additional Information

A couple of commercially produced topographic maps are under development by vendors in southwest Virginia. One of these maps (produced by Abingdon Spatial Technologies) will be available for purchase in late March 2004 from local marinas and other retailers in the lake area or directly from Abingdon Spatial Technologies (phone number: (276) 628-6095). Overview maps are available on this website. An overview map with local roads is available on the Friends of Claytor Lake website at www.focl.org .

Claytor Lake is long and steep-sided, so use a depth finder to look for underwater humps and points. Clues to locations of these key features can be found by looking at the surrounding land at any point on the lake. If you are next to a steep ridge, it is unlikely that you are close to any shallow water habitat. Look for shallow water habitat on the opposite shoreline from steep ridges. The old New River channel typically follows close to the steep areas along the lake's shoreline.

If you have fishing questions about Claytor Lake that are not answered by reading this fishing guide, call VDGIF fisheries biologist John Copeland at the Blacksburg office (540-961-8304), or email him at jcopeland@dgif.state.va.us .

Helpful information is typically available from marinas near the lake, like Lakeside Marina, located near Claytor Lake State Park, or Rockhouse and Conrad Brothers Marinas, located off old Route 100 south of Dublin.